Part 3

DESCRIPTION OF CHECKING AND ADJUSTMENT

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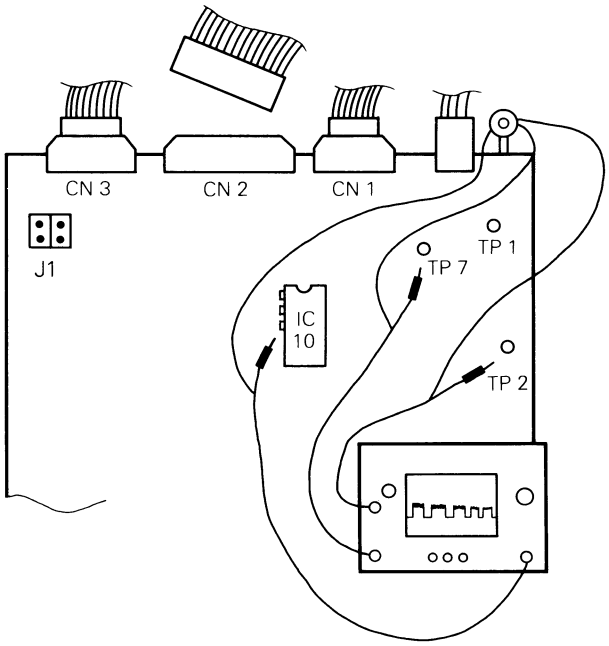
ADJUSTMENT OF IMAGE SCANNER

1. Wave check by the oscilloscope

(1) Set a white sheet of paper under the Image Scanner.
(2) Connect CH1 and CH2 of the oscilloscope to **TP2** and **TP7** on the IT.I/O PCB.
(3) Connect the EXT trigger terminal to **pin 3** of the **IC10** and another wire of it to the ground line.
(4) Remove the connector **CN2 (30p)** from the IT.I/O PCB.
(5) Check the above operation and turn the power switch on.
(6) Pull off J1 and cap it on the next pins.



!!ATTENTION!!
After checking the Image signal, turn the power off and return J1 to the original position and connect CN2.

2. Image adjustment

(1) Check the differences among blocks by the test chart No. 10.
If there is a difference, adjust **VR-1 to VR-4 on the Image Scanner** as described in step 4.
If there is no difference, forward to the next procedure below.
(2) Check the differences inside a block by the test chart No. 10.
If there is a difference, adjust by **VR-4 on the IT.I/O PCB** as described in step 5.
If there is no difference, forward to the next procedure below.
(3) Check the overall contrast and sharpness by test chart No. 8.
In order to change the contrast, adjust it by **VR-5 on the IT.I/O PCB** as described in step 6.
To change the sharpness, adjust it by **VR-6 on the Image Scanner** as described in step 3.

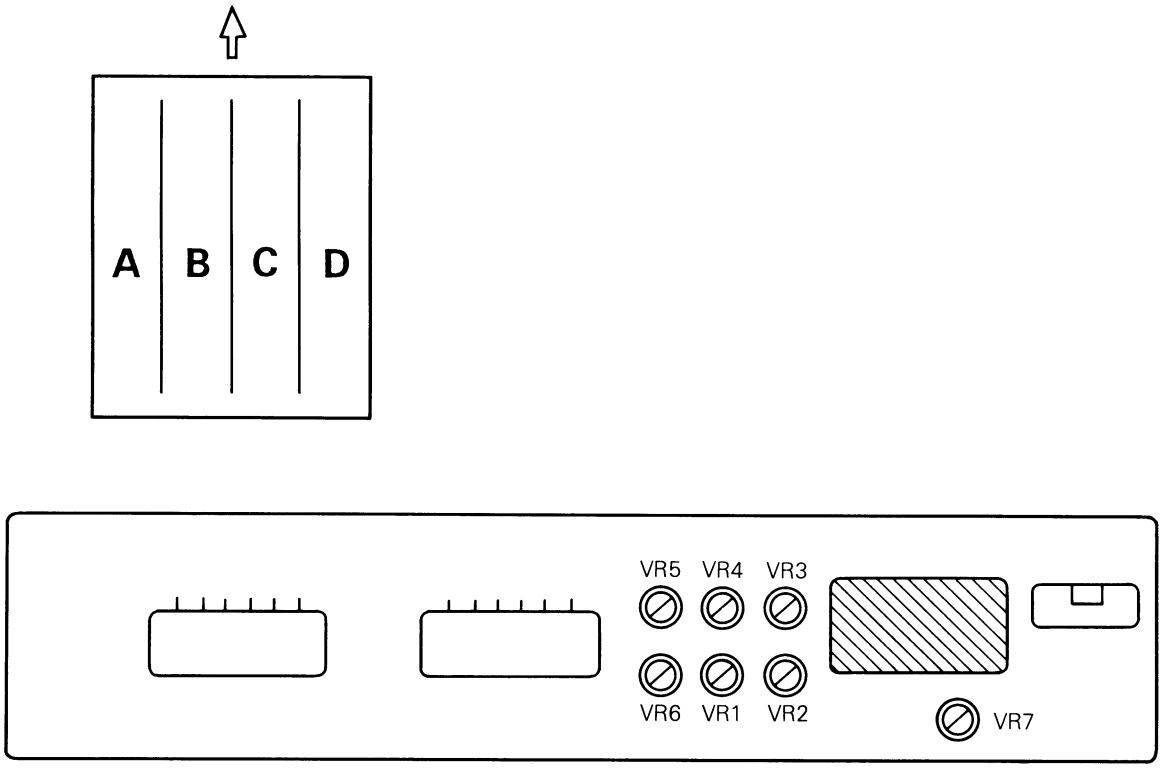
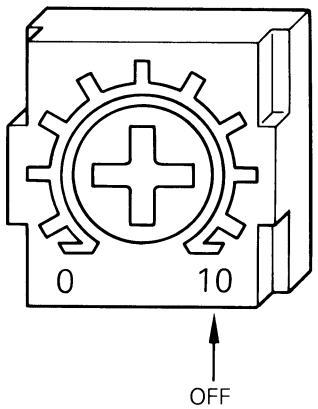


Image Scanner PCB



VR-4 and VR-5 on the IT.I/O PCB

3. How to set the Image Scanner level

The Voltage level for white image by the Image Scanner is about **3 volts** as standard. Having the Voltage level lower causes dark printing with set-off. Having the Voltage level higher causes light printing with unclear characters. The Voltage level adjustment for the whole area can be performed by **VR-6 on the Image Scanner**. Turning VR to the left makes the level lower and consequently the contrast higher.

4. Adjustment among blocks (Each level adjustment for a four-divided block)

If there is a difference among 4 blocks in Master-making and printing contrast, adjust as follows:

(1) Turn **VR-4 on the IT.I/O PCB** to the utmost right. (VR-4 is for ACC lowest level adjustment)

(2) The Voltage level adjustment for each block can be performed by **VR-1 to VR-4 on the Image Scanner**.

As in the figure

Level adjustment for side A at **VR-1**

Level adjustment for side B at **VR-2**

Level adjustment for side C at **VR-3**

Level adjustment for side D at **VR-4**

Turning VR to the right makes the level lower and printing contrast higher.

!!ATTENTION!!
Do not touch VR-5 and VR-7.

7. Adjustment of Image Scanner in the Field

(1) If a oscilloscope is not available, you can get the proper Image Voltage level by using the test chart No. 10 and **VR-1 to VR-4** on the Image Scanner.
Turning VR to the right causes darker printing.
Turning VR to the left causes lighter printing.

5. Adjustment inside a block (Adjustment of ACC lowest level)

(1) Set the Density Dial on the sub-panel neutral.

(2) Check if printing contrast is uneven or if thin lateral lines have disappeared in Master-making process by printing the test chart No. 10.

(3) If there is some uneveness in printing contrast:
Turn **VR-4** (ACC lowest level adjustment VR) **on the IT.I/O PCB** to the left.

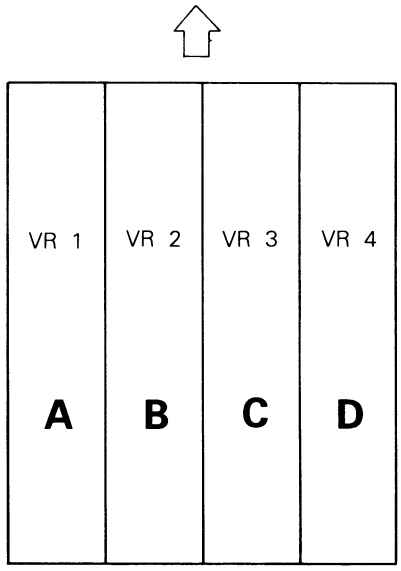
(4) If thin lateral lines have disappeared:
Turn **VR-4** (ACC lowest level adjustment VR) **on the IT.I/O PCB** to the right.

6. Slice level adjustment

(1) Set the Density Dial on the sub-panel neutral.

(2) Check if the Master-making and printing contrasts are proper at each mode (1, 2, 3) of the Master-making Density select.

(3) If the contrast is too high:
Turn **VR-5** (Slice level adjustment VR) **on the IT.I/O PCB** to the left.
If the contrast is too low:
Turn **VR-5** (Slice level adjustment VR) **on the IT.I/O PCB** to the right.



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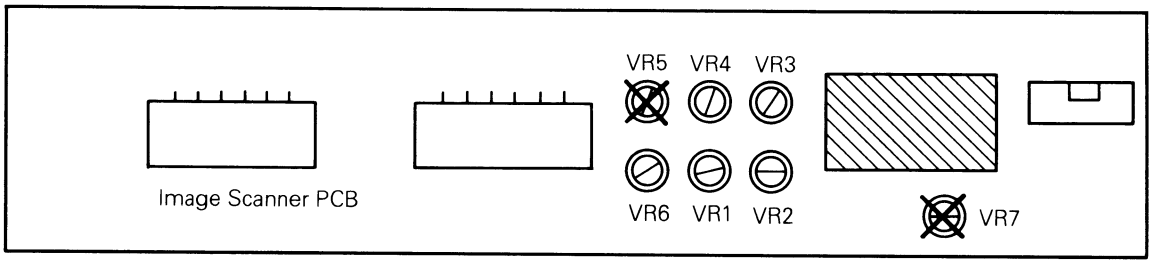
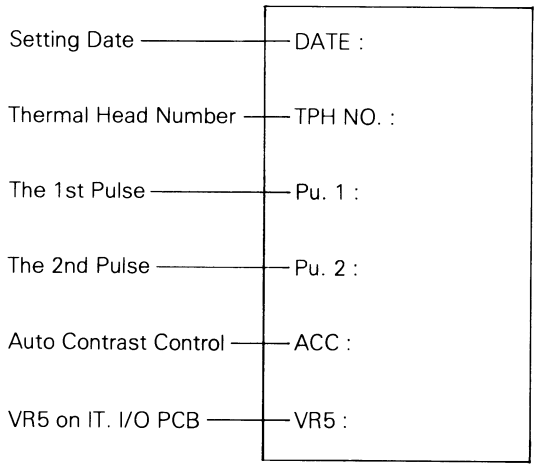
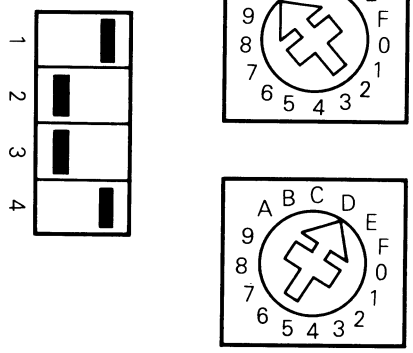
(2) To adjust the Voltage level for the whole area, use **VR-6** and the test chart No. 8.
(The standard voltage is usually set at the factory.)
Turning VR-6 changes the Voltage level for white image.
If the level is set low, image will be darker with set-off.
If the level is set high, image characters will be lighter.

!!ATTENTION!!
Do not attempt to adjust VR-5 and VR-7 on the Image Scanner Board.



8. Installation of IT.I/O PCB in the Field

(1) If it is necessary to change the IT.I/O PCB, make VR adjustments on it according to the Factory Adjustment Tag attached to the Support Frame.
Also note the setting of IT.I/O PCB on the Frame.

Note:
Set the switches to the same position as on the previous IT.I/O PCB.